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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,179	09/26/2003	Christopher Cave	I-2-0414.1US	9858

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VOLPE AND KOENIG, P.C.  
DEPT. ICC  
UNITED PLAZA, SUITE 1600  
30 SOUTH 17TH STREET  
PHILADELPHIA, PA 19103

EXAMINER
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MEHRA, INDER P

ART UNIT	PAPER NUMBER
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2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/672,179

Applicant(s)

CAVE ET AL.

Examiner

Inder P. Mehra

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 4-6 and 14-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/19/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This office action is in response to application dated: 9/6/03. Based on this application, claims 1-20 are pending.

#### ***Information Disclosure Statement***

2. The information disclosure statement filed 9/19/05 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because "Other Documents" -- "3 G TS 25.211.3<sup>rd</sup> Generation Partnership Project---" has not been received along with the IDS. Further, IDS's dated 4/9/04 and 8/30/04 are duplicate of IDS dated 9/19/05. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

#### ***Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Admitted Prior Art (Background of Instant application), hereinafter, APA** in view of **Toskala et al** (US PG Pub. No. 2006/0203753), Toskala.

For claims 1 and 11, APA discloses, “a wireless communication system having a Node B and a plurality of wireless transmit/receive units (WTRUs)”, ( APA discloses, “Many current communication systems have uplink common channels (i.e., channels which handle communications transmitted from a WTRU to the Node B) which are accessible by all WTRUs. These channels are used to establish and maintain a wireless connection between the WTRU and the Node B for transmitting both control information and data, refer to page 2 of specification, paragraph 0009) , the system comprising:

- a contention-based uplink (UL) channel for supporting UL transmissions from the WTRUs to the Node B; said UL channel being randomly accessed by a WTRU when the WTRU is ready to transmit data (APA discloses, “The random access channel (RACH) of a 3G system in the TDD mode is such a channel. The RACH is defined as an uplink contention-based common transport channel. When two or more WTRUs attempt to transmit their respective information over the RACH channel at the same time, a contention may occur. To alleviate the contention problem, each WTRU waits a different random amount of time before retransmitting its message to the Node B, refer to page 2 and paragraph 0009 of specifications); and

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APA does not disclose explicitly the following limitations, which are disclosed by Toskala, as follows:

- at least one downlink (DL) physical channel for supporting DL transmissions from the Node B to the WTRUs said DL transmissions including an acquisition indicator and information regarding said acquisition indicator; whereby said acquisition indicator confirms whether the data transmitted over said UL channel was successfully received by the Node B, **(Toskala discloses, “Upon receiving acknowledgement from the base station BTS on the corresponding downlink acquisition indication channel (AICH), the UE sends a collision detection preamble which is used to differentiate between simultaneous access attempts by different user equipment that may have been in the access procedure simultaneously on the same physical channel”, refer to paragraph 0014, 0008, and 0049). Further, Toskala discloses, “another attempted solution to the uplink access problem has been to use versatile channel assignment (VCAM), where the channel is assigned, after access preambles are exchanged, by way of an acquisition indication channel (AICH)”, refer to paragraphs 0008 and 0049).**

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of “at least one downlink (DL) physical channel for supporting DL transmissions from the Node B to the WTRUs said DL transmissions including an acquisition indicator and information regarding said acquisition indicator; whereby said acquisition indicator confirms whether the data transmitted over said UL channel was

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successfully received by the Node B”, as taught by Toskala. The capability can be implemented by Base station (Node B). The motivation for using this capability is to avoid collision or contention at uplink channel.

5. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **APA** in view of Toskala, as above, and further in view of **Muramoto et al** (US P.G.Pub. No. 2005/0180377), hereinafter, ‘377.

For claims 2 and 12, APA in view of Toskala discloses all the limitations of subject matter with the exception of the following limitations which are disclosed by ‘377 as follows:

- wherein said information regarding said acquisition indicator includes the timeslot occupied by said acquisition indicator(**Refer to ‘377’s paragraphs 0076, 0078 and 0089, and fig. 6).**

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of “wherein said information regarding said acquisition indicator includes the timeslot occupied by said acquisition indicator”, as taught by ‘377. The capability can be implemented by Base station (Node B). The motivation for using this capability is to avoid collision or contention at uplink channel.

6. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **APA** in view of Toskala, as above, and further in view of **Dahlman et al** (US P.G.Pub. No. 20040008658), hereinafter, ‘Dahlman.

For claims 3 and 13, APA in view of Toskala discloses all the limitations of subject

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matter with the exception of the following limitations which are disclosed by Dahlman, as follows:

wherein said information regarding said acquisition indicator includes the code used to transmit said acquisition indicator, (Dahlman discloses, “the base station can transmit acquisition indicator signals as different orthogonal code words for different signatures”, Refer to paragraph 0039).

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of “wherein said information regarding said acquisition indicator includes the code used to transmit said acquisition indicator”, as taught by Dahlman. The capability can be implemented by Base station (Node B). The motivation for using this capability is to avoid collision or contention at uplink channel.

7. Claims 7, 9, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **APA** in view of Toskala, as above, and further in view of **Miller et al** (US Patent. No. 5,956,644), hereinafter, Miller.

For claims 7, 9, 17 and 19, APA in view of Toskala discloses all the limitations of subject matter with the exception of the following limitations which are disclosed by Miller., as follows:

\* wherein said information regarding said acquisition indicator is transmitted in the broadcast channel of a Time Division Duplex system, (Miller discloses, “this information can include data about the number of broadcast channels being received and monitored, the number of acquisition channels being used, refer to col.8 lines 50-55). .

It would have been obvious to the person of ordinary skill in the art at the time the

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invention to use the capability of “wherein said information regarding said acquisition indicator is transmitted in the broadcast channel of a Time Division Duplex system”, as taught by Miller. The capability can be implemented by Base station (Node B). The motivation for using this capability is to avoid collision or contention at uplink channel.

8. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Toskala, as above, and further in view of Sun et al (US Patent. No. 6965633), hereinafter, Sun.

For claims 8 and 18, APA in view of Toskala discloses all the limitations of subject matter with the exception of the following limitations which are disclosed by Sun., as follows:

- wherein said acquisition indicator is transmitted in a dedicated physical channel of a Time Division Duplex system., (Sun discloses, “dedicated physical channel (DPCH), common control physical channel (CCPCH), dedicated shared channel (DSCH) and acquisition indicator channel (AICH), etc. as down link physical channel”, refer to col. 1 lines 33-36).

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of “wherein said acquisition indicator is transmitted in a dedicated physical channel of a Time Division Duplex system”, as taught by Sun. The capability can be implemented by Base station (Node B). The motivation for using this capability is to avoid collision or contention at uplink channel.



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9. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Toskala, as above, and further in view of Han et al (US Patent. No. 20040047333), hereinafter, Sun.

For claims 10 and 20, APA in view of Toskala discloses all the limitations of subject matter with the exception of the following limitations which are disclosed by Han., as follows:

- wherein said acquisition indicator is transmitted in a dedicated physical channel of a Time Division Duplex system., (**Han discloses, “The transport channels are herein a coded composite transport channel (CCTrCH), a paging indicator channel (PICH), and an acquisition indicator channel (AICH), refer to paragraph 0047).**

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of “wherein said acquisition indicator is transmitted in a dedicated physical channel of a Time Division Duplex system., as taught by Sun The capability can be implemented by Base station (Node B). The motivation for using this capability is to avoid collision or contention at uplink channel.

***Allowable Subject Matter***

10. Claims 4-6 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Prior Art of Record***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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- **Seo et al** (US PG Pub. No. 2002/0163956) discloses a receiver capable of simplifying hardware required for finger and combiner in accordance with the channel characteristics in a 3<sup>rd</sup> generation mobile communication systems.

***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P. Mehra whose telephone number is 571-272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Inder Pal Mehra 12/20/06*  
Inder P Mehra  
Examiner  
Art Unit 2617

*JOHN PEZZLO*  
PRIMARY EXAMINER